Cotton/Soybean Insect Newsletter

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Pest Patrol Alerts

The information contained herein each issue is available via text alerts that direct users to online recordings. I will update the short message often for at least as long as the newsletter runs. After a new message is posted, a text message is sent to alert users that I have recorded a new update. Users can subscribe for text message alerts for my updates in two easy steps. Step one: register by texting **pestpat7** to 97063. Step two: reply to the confirmation text you receive by texting the letter "y" to complete your registration. Pest Patrol Alerts are sponsored by Syngenta.

Updates on Twitter

When noteworthy events happen the in the field, I will be sending them out quickly via Twitter. If you want to follow those quick updates, follow me at **@bugdocisin** on Twitter.

News from Around the State

Drake Perrow, producer and consultant in Calhoun County, commented earlier this week that he is picking up some fungus on cotton aphids but also seeing some spider mites building. **Charles Davis**, county agent in Calhoun County, reported seeing symptoms of the Cotton Leafroll Dwarf Virus (CLRDV) transmitted by cotton aphid. I have observed some of that in my plots and in commercial fields also, but there doesn't seem to be any noticeable effects on square, bloom, or boll retention. So far, these symptoms are just symptoms until we see some loss of yield demonstrated. **Fleming McMaster**, local crop consultant, reported seeing the typical insects in cotton and soybeans this week, with nothing needing immediate attention. **William Hardee**, county agent covering Horry, Marion, and Dillon Counties, asked today about snails in soybeans. First of all, these are rare, non-insect pests that do not do much damage, unless the plants are young. Also, unfortunately, insecticides are not labeled for use on and do not provide control of snails or slugs in row crops. Pelleted bait with metaldehyde is expensive and provides erratic control. It is best to only attempt control of snails or slugs in gardens or very small fields of high-input crops.

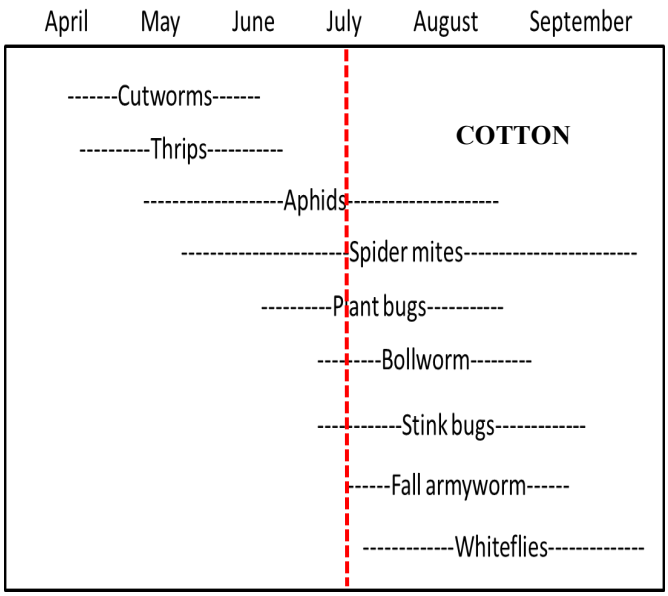
Virtual Scouting Workshop

Because we cannot conduct in-person trainings or workshops due to the coronavirus pandemic, I am working on offering at least one ***live*** scouting workshop from the field using Zoom. I will be working with county agents next week on a test run for this workshop. If it works like it should and could, we will be able to interact with participants, answering questions as I walk through cotton and soybeans and participants virtually walk with me from the comfort of their remote site. We will identify insects (pests and beneficials), discuss sampling methods, and cover treatment thresholds and other control strategies. Stay tuned for details on this possibility very soon.

Cotton Situation

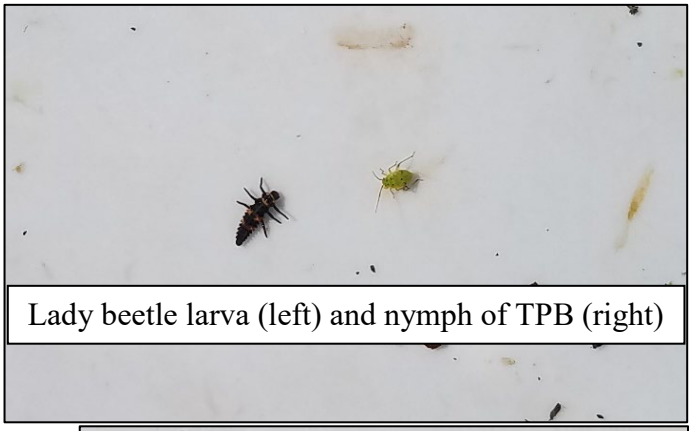
As of 12 July 2020, the USDA NASS South Carolina Statistical Office estimated that about 58% of the crop is squaring, compared with 37% at this time last week, 67% at this time last year, and 61% for the 5-year average. About 7% of the crop is setting bolls, compared with 4% at this time last week, 31% at this time last year, and 21% for the 5-year average. The condition of the crop was described as 13% excellent, 51% good, 19% fair, 10% poor, and 7% very poor. These are observed/perceived state-wide averages.

Cotton Insects

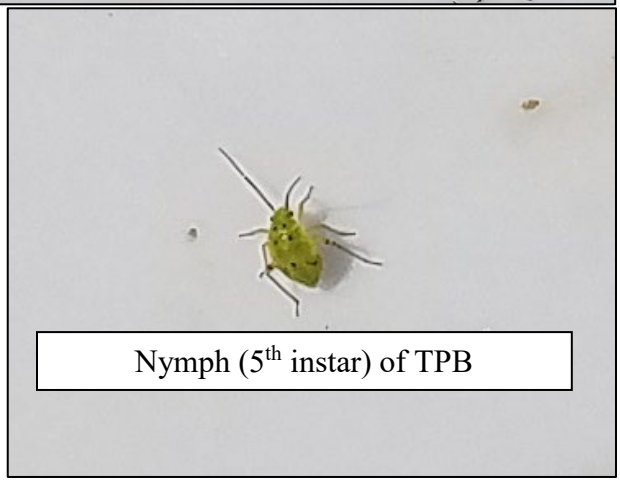


As I mentioned last week, the calendar has us where we historically have to watch out for numerous species in cotton. Thankfully, Bt technology helps us with most of the Lepidopterans (caterpillars) that are pests of cotton. Those of us old enough to remember the battles we had with tobacco budworm (TBW) and beet armyworm (BAW) in the early and mid-1990s were sure glad Bt technology came online when it did. Pests such as TBW and BAW were very bad for cotton business in 1995…how times have changed. The next time you hear someone complain about having to do something about corn earworm/bollworm (CEW/BW) in cotton, please remind them to appreciate the built-in "sprays" they have for TBW, BAW, other armyworms, borers, etc. Remember, we basically plant Bt technology to control those pests. We still have to watch out for CEW/BW, but we can manage that species knowing what we don't have to worry about, right? With my "sermon" out of the way, I have noticed bollworm moths flying around in blooming cotton, and trap captures are trending up slightly. I saw a couple of small caterpillars on some small bolls in non-Bt cotton this morning. We didn't see any injury to Bt cotton (2- or 3-gene) when scouting my trials this morning, but it is time to scout for eggs, injury to squares, and look for damage to bolls under bloom tags, particularly on 2-gene cotton.

This will probably be the last time we address plant bugs in cotton in the newsletter this season. During squaring and up to the first full week of bloom, the threshold for TPB is 8 bugs per 100 sweeps and you see square retention less than 75-80%. For the first two weeks of blooming, the sweep-net threshold can still be used, but it is best to switch over to using a black drop cloth for sampling the small green nymphs that are easily observed on the dark cloth – the contrast makes it easier to see them. The treatment threshold for TPB using a black dropcloth is 3 TPB per 5 or 6 rowft. Here is a rundown on what we observed this week in our small survey of fields for TPB during the first couple of weeks of bloom. Across 8 commercial fields, we averaged about 2.7 TPB per 100 sweeps (we found 87 TPB in 3200 sweeps), square retention ranged 93 to 99%, we found almost no "dirty" blooms, and found less than 1 TPB per 5 rowft on drop-cloth samples. This is a small sample of fields, but it did represent fields in Barnwell, Orangeburg, and Calhoun Counties. Only one of the fields was getting close to a threshold number of TPB, but the square retention was at 93% in that field, and all else looked good. We do have some fields that legitimately need spraying for TPB, but those fields have to be identified by a good consultant/scout. Hire one to scout your cotton.



Lady beetle larva (left) and nymph of TPB (right)



Nymph (5th instar) of TPB

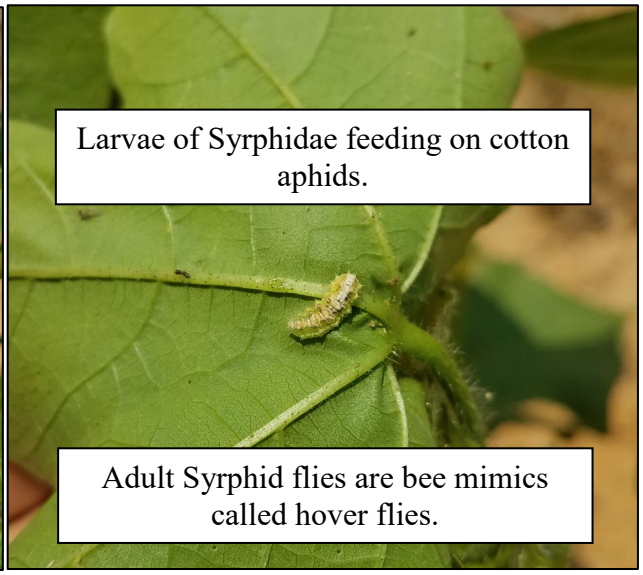
Cotton aphids are building in some locations and crashing due to the naturally occurring fungus *Neozygites fresenii* in some areas. Keep watching for infestations of aphids and looking for symptoms of the viral Cotton Leaf Roll Dwarf Disease (CLRDD) transmitted by cotton aphid. We do not think that aphid sprays are needed in most cases.

Leaf crinkling perhaps due to CLRDV

Leaf curl due to cotton aphid and crinkle maybe to CLRDV

Because we have observed many aphids in some fields, those fields have developed a robust population of beneficial arthropods. Here are two common predators easily located in the field right now.

Larvae of *Scymnus* sp. lady beetle (white waxy covering on dorsum) feeding on cotton aphids



Larvae of Syrphidae feeding on cotton aphids.

Adult Syrphid flies are bee mimics called hover flies.

We are getting close to August, also known as "stink bug month." So, you should note the first week of bloom for scouted fields to use our dynamic boll-injury threshold to control stink bugs. You MUST know when the first week of bloom is for each field to properly use this threshold. We consider the first week of bloom when every other plant has its initial white flower. This occurs shortly after you notice the first bloom in the field. Don't miss noting the first week of bloom! We will cover stink bugs more in cotton in the coming weeks, but, during the first couple of weeks of bloom, we should be scouting for bollworm intently, particularly in 2-gene cotton, as this time period is probably the most critical for bollworm detection and management.

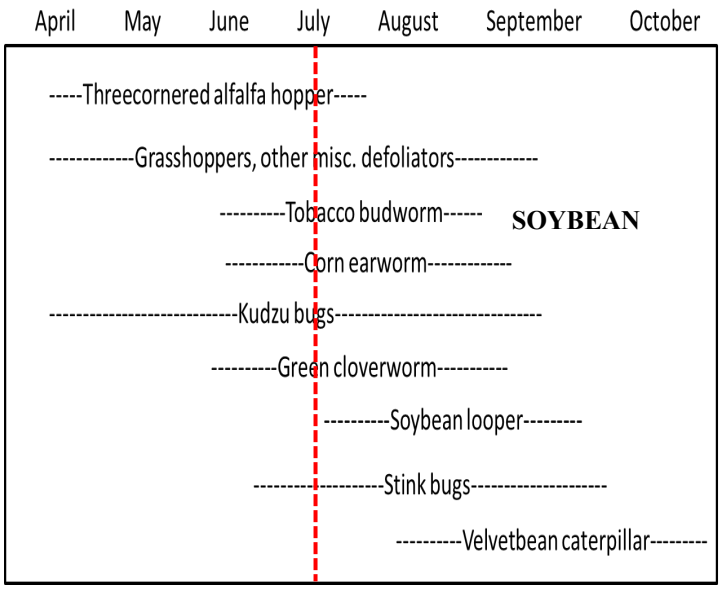
Soybean Situation

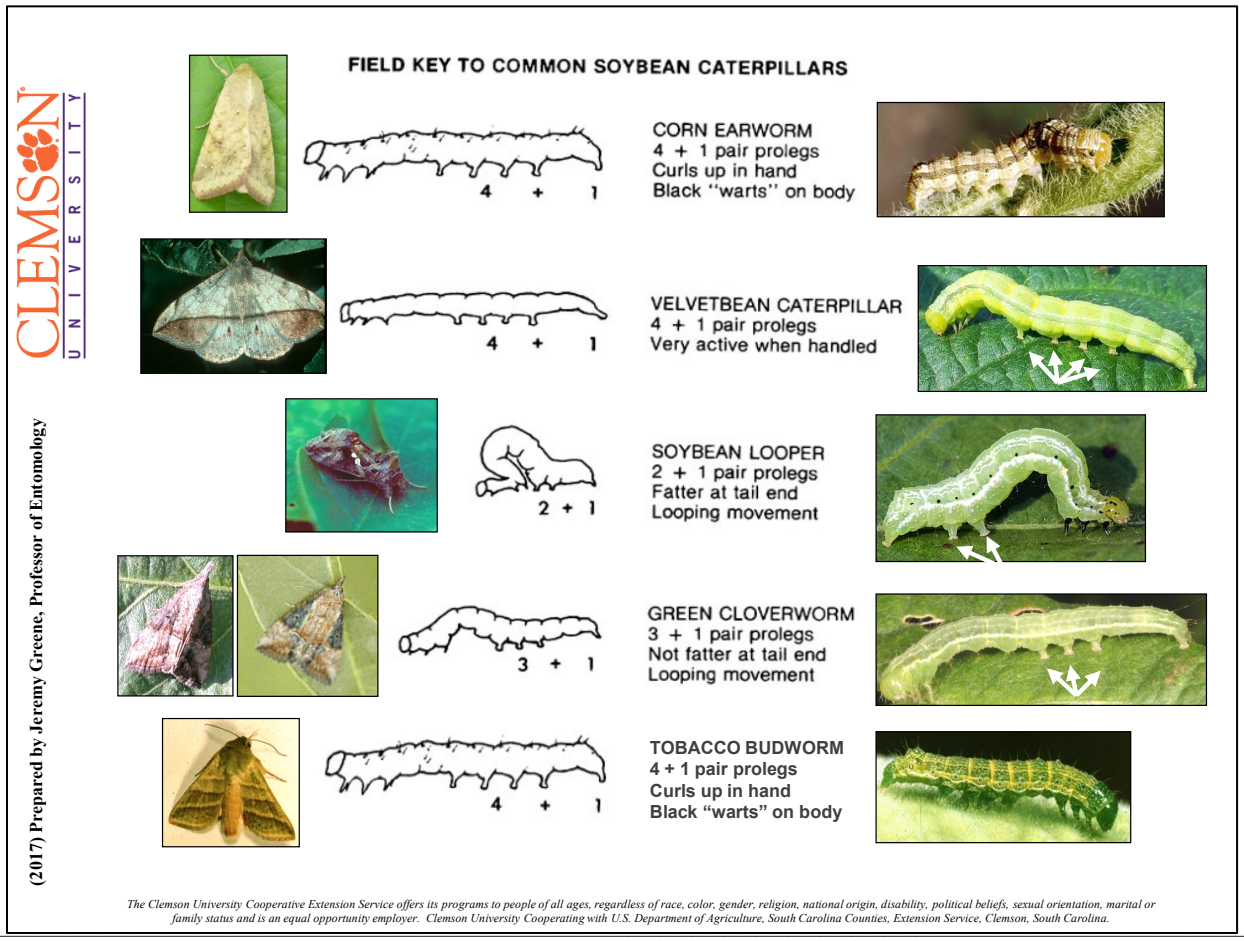
As of 12 July 2020, the USDA NASS South Carolina Statistical Office estimated that about 96% of the crop has been planted, compared with 92% the previous week, 97% at this time last year, and 98% for the 5-year average. About 90% of the crop has emerged, compared with 85% the previous week, 90% at this time last year, and 93% for the 5-year average. About 14% of the crop is blooming, compared with 7% the previous week, 13% at this time last year, and 12% for the 5-year average. The condition of the crop was described as 18% excellent, 39% good, 28% fair, 6% poor, and 9% very poor. These are observed/perceived state-wide averages.

CLEMSON UNIVERSITY

Soybean Insects

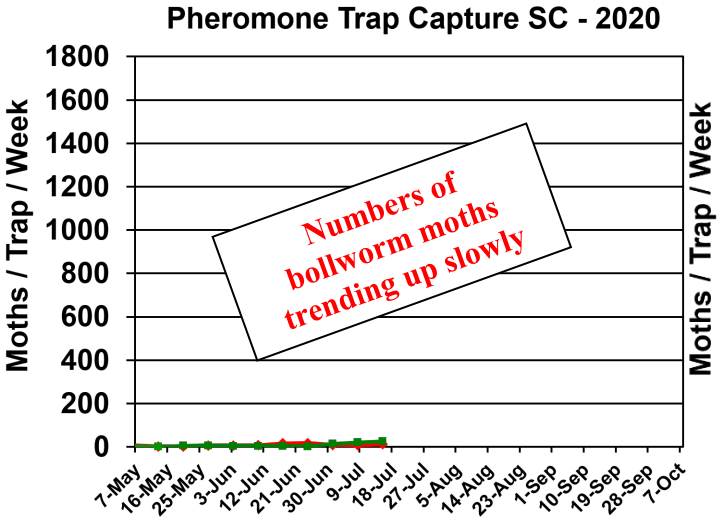
I noticed an increase in the number of species of pest insects in soybeans this week. I saw soybean looper (SBL), green cloverworm (GCW), redbanded stink bug, kudzu bugs, threecornered alfalfa hoppers, and many other species. No one species stood out as problematic across fields, but I did see some very small SBL and GCW, so we are probably looking at some pending defoliation soon. I noticed a few moths "flushing" as I walked rows this week, so be able to identify those moths, as it will give you a pretty good idea of what is coming. The females are laying eggs, and hungry caterpillars will be present quickly! Use the figure below to identify the moths you see in the field.

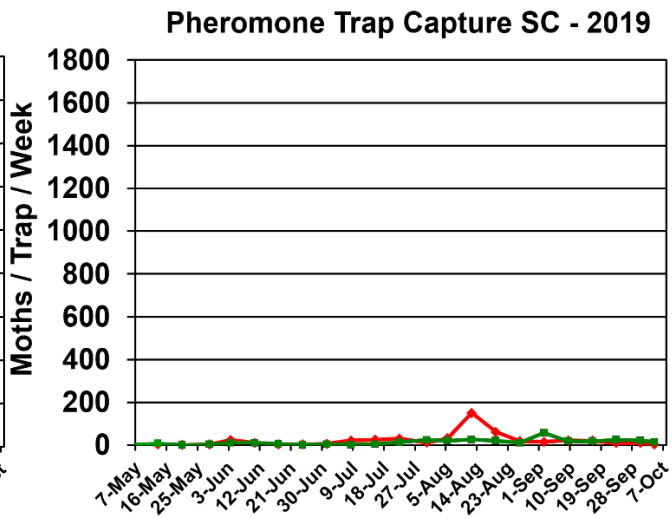




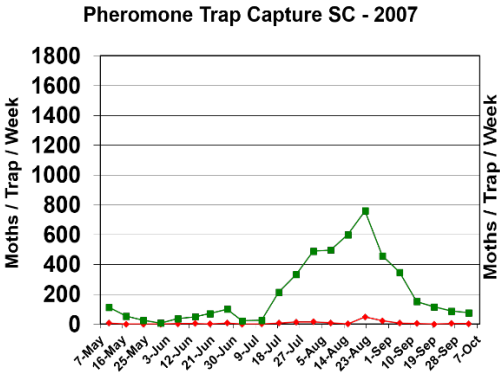
Bollworm & Tobacco Budworm

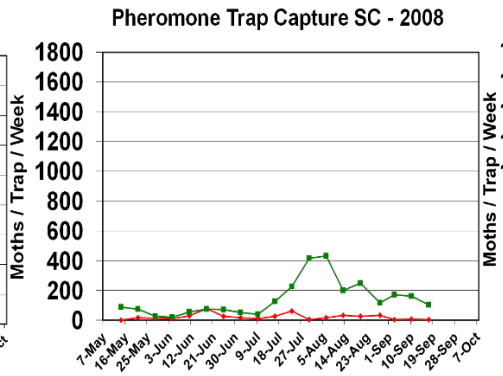
Captures of bollworm (BW) and tobacco budworm (TBW) moths in pheromone traps at EREC this season are shown below, as are the captures from 2007-2019 for reference. Tobacco budworm continues to be important for our soybean acres and for any acres of non-Bt cotton. I provide these data as a measure of moth presence and activity in our local area near my research plots. The numbers are not necessarily representative of the species throughout the state.

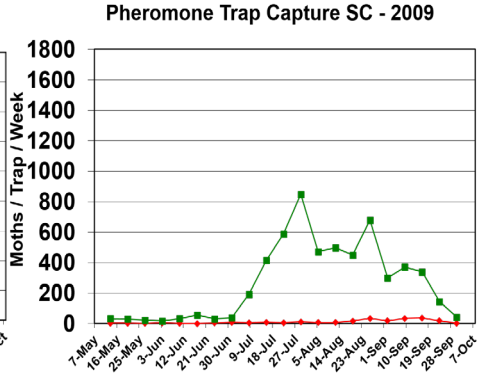


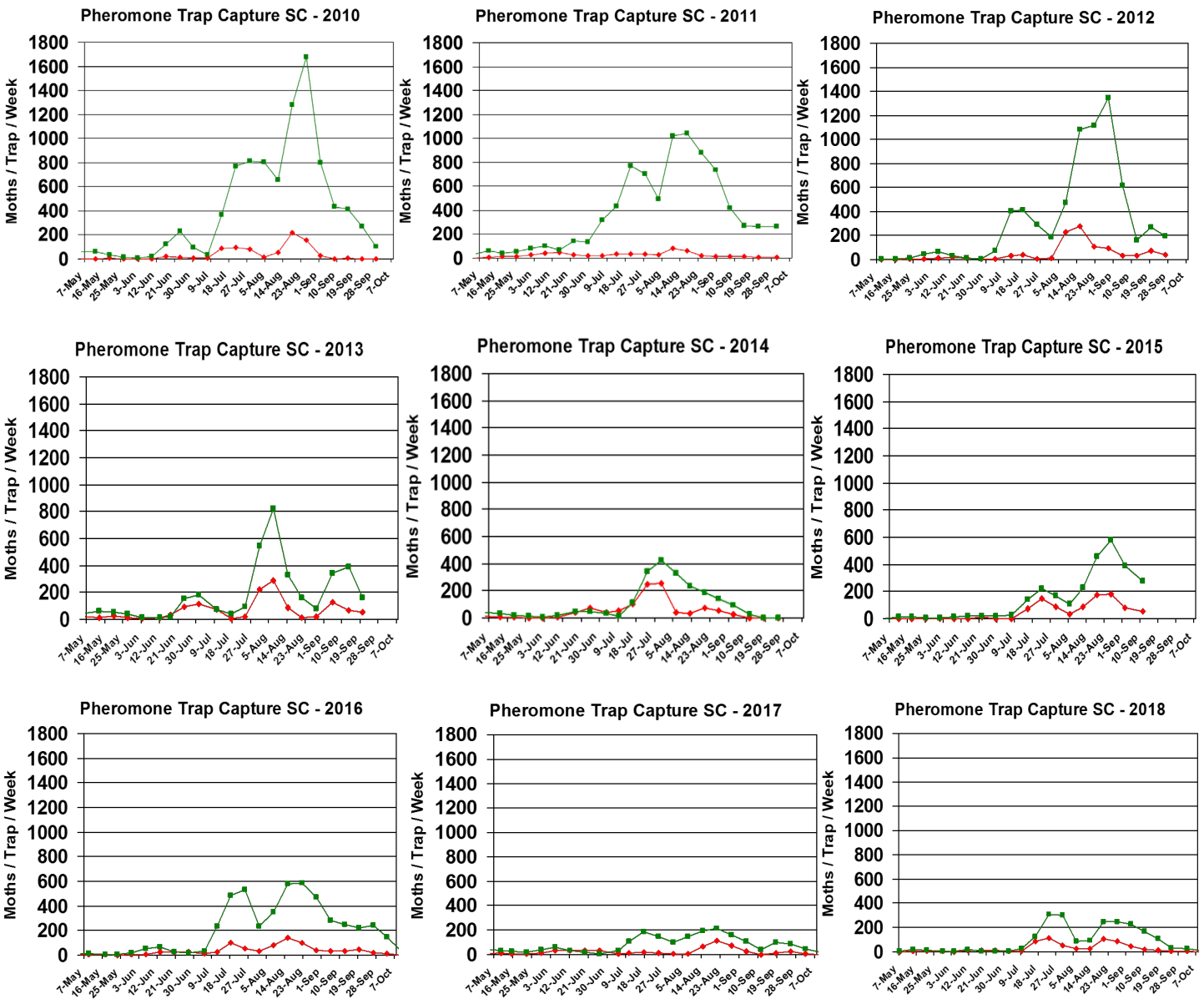


Trap data from 2007-2018 are shown below for reference to other years of trapping data from EREC:





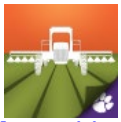




Pest Management Handbook – 2020

Insect control recommendations are available online in the 2020 South Carolina Pest Management Handbook at:
https://www.clemson.edu/extension/agronomy/pest%20management%20handbook.html

Free Mobile Apps: "Calibrate My Sprayer" and "Mix My Sprayer"



Download our free mobile apps called "Calibrate My Sprayer" and "Mix My Sprayer" that help check for proper calibration of spraying equipment and help you with mixing user-defined pesticides, respectively, in custom units (available in both iOS and Android formats):
http://www.clemson.edu/extension/mobile-apps/

Need More Information?

For more Clemson University Extension information: http://www.clemson.edu/extension/

For historical cotton/soybean insect newsletters:
https://www.clemson.edu/extension/agronomy/cotton1/newsletters.html

Sincerely,

Jeremy K. Greene, Ph.D.
Professor of Entomology

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